(19) World Intellectual Property Organization International Bureau



| **1816**|| 1888|| 1888|| 1888|| 1888|| 1888|| 1888|| 1888|| 1888|| 1888|| 1888|| 1888|| 1888|| 1888|| 1888|| 1888||

(43) International Publication Date 20 October 2005 (20.10.2005)

PCT

(10) International Publication Number WO 2005/098973 A1

(51) International Patent Classification7:

H01L 33/00

(21) International Application Number:

PCT/KR2005/001009

(22) International Filing Date: 7 Apr

7 April 2005 (07.04.2005)

(25) Filing Language:

Korcan

(26) Publication Language:

English

(30) Priority Data:

10-2004-0023696

7 April 2004 (07.04.2004) KR

(71) Applicants (for all designated States except US): LG INNOTEK CO., LTD [KR/KR]; 14th Fl., Hansol Bldg., 736-1, Yoksam-dong, Kangnam-gu, Seoul 135-983 (KR). KOREA RESEARCH INSTITUTE OF CHEMICAL TECHNOLOGY [KR/KR]; 100 Jang-dong, Yuseong-gu,

Daejeon-si 305-343 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KIM, Chang-Hae [KR/KR]; 138-1402 Hanvit Apt., Ueoeun-dong, Yusung-gu, Daejeon-si 305-755 (KR). PARK, Joung-Kyu [KR/KR]; 7-305 Gongdong Gwanri Apt., 431 Doryoung-dong, Yusung-gu, Daejeon-si 305-340 (KR). KIM, Sang-Kee [KR/KR]; 103-307 Chumdan Moa Apt., 757-5 Wolgye-dong, Gwangsan-gu, Gwangju-si 506-821 (KR).

KIM, Choong-Youl [KR/KR]; 302ho 967-1 Munheung-dong, Buk-gu, Gwangju-si 500-110 (KR).

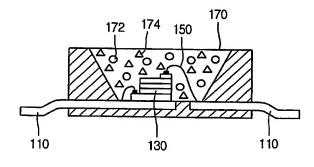
- (74) Agent: HAW, Yong-Noke; 8th 11., Songchon bldg., 642-15 Yoksam-dong, Kangnam-gu, Seoul 135-080 (KR).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, HD, HL, IN, IS, JP, KE, KG, KM, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GII, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: LIGHT EMITTING DEVICE AND PHOSPHOR FOR THE SAME



(57) Abstract: Provided is a light emitting device including a light emitting chip, and a phosphor through which a light emitting from the light emitting chip at least partially passes such that the light is converted into lights having at least two different wavelengths and emitted. The phosphor includes a silicate phosphor having a chemical formula of Sr3-xSiO5:Eu²+ x(0 < x < 1) to excite a second light having a first centered emission peak using the first light and a sulfide phosphor having a chemical formula of Sr1-xGa2S4:Eu²+ x(0.001 < x < 1) to excite a third light having a second centered emission peak using the first light.